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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/761,119

01/20/2004

Hajime Sugito

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EXAMINER

FORD, JOHN K

ART UNIT

PAPER NUMBER

3744

MAIL DATE

DELIVERY MODE

07/23/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/761,119	<b>Applicant(s)</b> SUGITO ET AL.	
	<b>Examiner</b> John K. Ford	<b>Art Unit</b> 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,30 and 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

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|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Applicant's response of April 9, 2008 has been carefully considered. Significant new limitations have been added to independent claim 1 and those are addressed in the rejections that follow.

Applicant's election in the November 5, 2007 response of the sub-species of Figure 10 (claims 1-6), without traverse, is acknowledged. Turning to the March 13, 2007 response, applicant's election of the third species, without traverse, is acknowledged. Claims 1, 3, 4, and new claims 30 and 31 are examined here.

Applicant's petition under 37 CFR 1.48(b) to correct inventorship of March 13, 2007 is acknowledged. It is approved. The inventive entity, after correction, will be Hajime Sugito, sole inventor.

Applicant has provided a translation of allowed claims in the Japanese application corresponding to the present one. The examiner is seeking to make decisions consistent with and/or cognizant of the overseas prosecution.

In the April 9, 2008 response applicant has included a translation of claims 1-5 of JPP '854 which claims have been granted in Japan. The examiner appreciates having this information. The claims there appear to be somewhat broader than the current claims here, although the current claims have some areas where they are somewhat unclear.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 4, 30 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, applicant claims a “sealed” second space. Because there are inlet and outlet pipes 160 and 170 communicating with the “sealed” second space, it would seem that the second space is more correctly characterized as an open space rather than a “sealed” space. Perhaps the sealed limitation should be limited to the sidewalls and lower plate, but not the upper plate, where pipes 160 and 170 communicate with the second space? More problematic is the recitation near the end of claim 1 of “adjacent said first small spaces” and “adjacent said second small spaces.” There is no antecedent basis for “said first small spaces” or for “said second small spaces”; neither of these terms having been defined previously in the claim. The examiner is unsure of their meaning. The confusion is magnified in claim 4 where these terms appear again with the additional limitation that they communicate with each other and are arranged to “coexist” with one another. The examiner is unsure of what “coexist” is intended to mean in this context. Don’t all separately defined spaces “coexist” by definition?

In claims 30 and 31 applicant again references the “small spaces” specifying alignment in a “longitudinal” direction. Is that direction parallel to the planes of the plates that make up the device or perpendicular to those planes? It is currently unclear.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-286382 in view of JP 2001-339027 and JP 2002-164490.

For purposes of explanation of JP 2002-286382, reference is made to USP 6,810,947 which applicant has identified as an equivalent of JP ‘382. In Figure 8, a lower plate 60B, an upper plate (the uppermost plate in upper stack 90), a plurality of intermediate plates (60A, 60C., 60D, 60E and 60F as well as plates in stack 90 below the uppermost) are all shown. These intermediate plates all have apertures defining a first space (see Figures 9A-9E) hermetically sealing a refrigerant therein. A second space is sealed from the first space by the bonding agent that seals the plates described above to one another. The second space located between tubes 80 is in proximity to the first space. A heat generating member 40 is mounted on the outer surface of the lower plate. No heat source is disclosed on the upper surface of the

uppermost plate in upper stack 90. Heat exchange occurs primarily in core unit 300.

The upper plate (the uppermost plate in stack 90) is in proximity to the second space (particularly between tubes 80). A heat source 40 is located adjacent the bottom plate 60B.

JP '027 teaches multiple heat sources on the bottom plate. In view of such a teaching, to have used multiple heat sources on the bottom plate of JP 2002-286382 would have been obvious to one of ordinary skill in the art in a situation needing such cooling (e.g. multiple motor thyristers in an electric vehicle, for example).

JP '490 teaches multiple heat sources on the top plate. In view of such a teaching, to have used multiple heat sources on the top plate of JP 2002-286382 would have been obvious to one of ordinary skill in the art in a situation needing such cooling (e.g. multiple sub-systems such as inverter controls in an electric vehicle, for example).

With respect the “first small spaces” and “second small spaces” limitations the examiner (in the absence of any structure to define the location of those spaces) would argue that whatever small portions of the internal space within the bottom plate pack 60 and the top plate pack 90 which are adjacent to the corresponding plurality of the heat sources on the upper and lower plates would constitute a first or second “small space” arranged adjacent to the corresponding heat source.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Ford whose telephone number is 571-272-4911. The examiner can normally be reached on Mon.-Fri. 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John K. Ford/

Primary Examiner, Art Unit 3744